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Teresa B. Badura

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FREDERICK W. GIBB, III  
Gibb Intellectual Property Law Firm, LLC  
2568-A RIVA ROAD  
SUITE 304  
ANNAPOLIS, MD 21401

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* TERESA B. BADURA, BONNIE A. BARTLETT, CATHY A. BURESCH, THOMAS M. CARR, LUIS CRUZA, JAMES P. GILBERT, JUDY J. KOGUT-O'CONNELL, CAROL A. O'REILLY, DONNA M. PLATT, CHERYL K. REESE, ANN T. STORMS, MARY M. TAMNEY, PAMELA S. TESCH, and JOHN WILCZEWSKI

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Appeal 2008-4540<sup>1</sup>  
Application 09/943,841  
Technology Center 3600

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Decided: March 25, 2009

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Before HUBERT C. LORIN, ANTON W. FETTING, and  
BIBHU R. MOHANTY, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

## STATEMENT OF THE CASE

Teresa B. Badura, et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-3, 5-8, 10, 12-16, and 18-22. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

## SUMMARY OF DECISION

We AFFIRM.<sup>2</sup>

## THE INVENTION

The invention is a method for selecting from a plurality of communication arrangements which input a first party's ability to communicate. (Specification [0005].)

The invention evaluates the communication arrangement based on the first party's ability to communicate. The invention repeats the evaluating process for a different communication arrangement if the first party's ability does not match a communication arrangement previously evaluated. The invention then selectively 20 performs a cost-benefit analysis with respect to a communication arrangement matching the first party's ability and implements a communication arrangement when the first party's ability matches a communication arrangement. The cost-benefit analysis shows whether the communication arrangement is justified.

*Id.*

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<sup>2</sup> Our decision will make reference to the Appellants' Appeal Brief ("App. Br.," filed Sep. 26, 2007) and Reply Brief ("Reply Br.," filed Feb. 7, 2008), and the Examiner's Answer ("Answer," mailed Dec. 26, 2007).

Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A method of selecting from a plurality of modes of communication, comprising:
  - inputting a first party's ability to communicate with a second party;
  - evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate, wherein said modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement, and wherein said evaluating comprising:
    - inputting said first party's ability into a decision tree,
    - determining a cost of establishing and maintaining said mode of communication,
    - determining a savings associated with said mode of communication, and
    - comparing said cost to said savings to calculate a return on investment associated with said establishing and said maintaining of said mode of communication;
    - repeating said evaluating for a different mode of communication of said modes of communication if said first party's ability does not match a mode of communication of said modes of communication previously evaluated; and
    - implementing a mode of communication of said modes of communication when said first party's ability matches a mode of communication of said modes of communication.

## THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Marsh	US 6,681,106 B2	Jan. 20, 2004
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Dalheimer, Matthais Kalle. "Linux Tag 2001 Proceedings; Virtual Companies." Archived on 7/25/01 at <http://www.klaralvdalens-datakonsult.se/Presentations/LinuxTag2001-virtual-companies-presentation/virtualcompanies.html>. (Hereinafter Dalheimer.)

The following rejection is before us for review:

Claims 1-3, 5-8, 10, 12-16, and 18-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Marsh in view of Dalheimer.

## ISSUES

The first issue before us is whether the Appellants have shown that the Examiner erred in rejecting claims 1-3, 5, 8, 10, 12, 14-16, 18, 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Marsh in view of Dalheimer. The issue turns on whether one of ordinary skill in the art would have been led by Marsh and Dalheimer to 1) evaluate a cost effectiveness of a *mode of communication* of the claimed modes of communication and 2) to base the evaluation on the first party's *ability* to communicate.

The second issue before us is whether the Appellants have shown that the Examiner erred in rejecting claims 6 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Marsh in view of Dalheimer. The issue turns on whether one of ordinary skill in the art would have been led by Marsh and Dalheimer to the step of performing a cost-benefit analysis with respect to a mode of communication matching said first party's ability.

The third issue before us is whether the Appellants have shown that the Examiner erred in rejecting claims 7, 13, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Marsh in view of Dalheimer. The issue turns on whether one of ordinary skill in the art would have been led by Marsh and Dalheimer to the step of comparing the costs of different communication modes.

### FINDINGS OF FACT

We find that the following enumerated findings of fact (FF) are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

#### *Claim construction*

1. Claim 1 recites a method including “evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party’s ability to communicate, wherein said modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement.”
2. Claim 8 recites a method including “evaluating a cost effectiveness of a standard mode of communication of said modes of communication based on said first party’s ability to communicate, where said modes of communication comprise at least two of telephone, facsimile, e-mail, hard copy mail, and at least one on-line communication arrangement.”

3. Claim 14 recites a program storage device embodying a program of instructions to perform a method including “evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party’s ability to communicate.”
4. The Specification does not provide a definition for “ability”.
5. The ordinary and customary meaning of “ability” is “1 a : the quality or state of being able <~of the soil to hold water>; *esp* : physical, mental, or legal power to perform b: competence in doing : SKILL 2 : natural aptitude or acquired proficiency <children whose *abilities* warrant higher education>.” (*See Merriam-Webster’s Collegiate Dictionary* 2 (10<sup>th</sup> Ed. 1998.)(Entry for “ability.”)

*The scope and content of the prior art*

Marsh

6. Marsh relates to a system and method for analyzing wireless communication records and for determining optimal wireless communication service plans. (Col. 2, ll. 7-10.)
7. Marsh’s system includes an optimizer process, which uses a calling profile record for a given subscriber as input for the analysis of the usage patterns to provide recommendations for the most economical cellular service plans for the specific billing period associated with that profile record. (Col. 16, ll. 60-65.)

Dalheimer

8. Dalheimer describes challenges for virtual companies including selecting communication channels. (Pgs. 1-2.)

9. Dalheimer states “Some of the aspects to consider when selecting communication channels are asynchronous vs. synchronous channels, latency, and cost.” (Pg. 2, par. 2)
10. Dalheimer provides a table listing common communication channels. The table lists: email, postal mail, fax, telephone, video conferencing, IRC, IP telephony. (Pg. 2)

*Any differences between the claimed subject matter and the prior art*

11. Marsh does not describe telephone, facsimile, hard copy mail, electronic mail, and on-line communications arrangements as modes of communication.

*The level of skill in the art*

12. Neither the Examiner nor the Appellants have addressed the level of ordinary skill in the pertinent art of electronic procurement solution tools. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’”) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’”) (Quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

*Secondary considerations*



13. There is no evidence on record of secondary considerations of non-obviousness for our consideration.

## PRINCIPLES OF LAW

### *Claim Construction*

During examination of a patent application, a pending claim is given the broadest reasonable construction consistent with the specification and should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004). “[W]e look to the specification to see if it provides a definition for claim terms, but otherwise apply a broad interpretation. As this court has discussed, this methodology produces claims with only justifiable breadth. *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984). Further, as applicants may amend claims to narrow their scope, a broad construction during prosecution creates no unfairness to the applicant or patentee. *Am. Acad.*, 367 F.3d at 1364.” *In re ICON Health and Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007). Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003).

### *Obviousness*

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of

underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S.Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”) The Court in *Graham* further noted that evidence of secondary considerations “might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” 383 U.S. at 17-18.

## ANALYSIS

### *Claim 1*

The Appellants argue that neither Marsh nor Dalheimer teaches the steps of 1) evaluating a cost effectiveness of a *mode of communication* of the claimed modes of communication (App. Br. 27-29) and 2) basing the evaluation on the first party’s ability to communicate (App. Br. 30).

First, the Appellants argue that Marsh does not teach evaluating a cost effectiveness of a *mode of communication* as claimed but instead describes determining an optimal service plan for a single mode of communication (wireless service). (App. Br. 29.) The Appellants also argue that that Dalheimer does not describe evaluating costs of communication channels. (App. Br. 28.)

The Examiner admits that Marsh does not explicitly teach the step of evaluating modes of communication including telephone, facsimile, hard copy mail, electronic mail, and on-line communication arrangements. (Answer 6.) The Examiner cites Dalheimer to teach that companies can

choose to employ a variety of communication channels including: email, postal mail, fax, telephone, video conferencing, IRC, and IP telephony. *Id.* The Examiner contends that modifying the teaching of March to choose from the plurality of communication channels in Dalheimer “further expands the ability of Marsh et al. to enable selection of best telecommunication service provider for a customer based on historical usage and costs.” *Id.*

Claim 1 recites “evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party’s ability to communicate, wherein said modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement.” (FF 1.)

The Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *Id.* (citing *Graham*, 383 U.S. at 12 (emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR* at 1739. The operative question in this “functional approach” is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *KSR* at 1740.

We find that Marsh disclose a method for selecting wireless telephone service plans for a company. (FF 6.) A telephone is a claimed mode of communication. Dalheimer discloses that companies need to choose from different communication channels (i.e. modes). (FF 8-10.) We find that applying Marsh’s method of selecting wireless service plans to the choice of communication channels (i.e. modes) in Dalheimer is applying a known

method to familiar element and would yield predictable results. The result being a method of selecting a communication mode as claimed. Further, we note that the Appellants have not submitted any evidence of unexpected results. (FF 13.)

Second, the Appellants argue that neither Marsh nor Dalheimer teach basing the evaluation on the first party's ability to communicate (App. Br. 30.) The Appellants argue that Marsh only evaluates whether a subscriber of a wireless plan is on an optimal service plan based on usage patterns and that "usage patterns" do not teach the subscriber's ability to communicate. (App. Br. 30.) Further, the Appellants argue that while Dalheimer vaguely references cost as a consideration in choosing a communication channel, the cost does not teach the subscriber's ability to communicate. *Id.*

The Examiner contends that Marsh teaches basing the cost evaluation on the first party's ability to communication. (Answer 16.) The Examiner contends that the step of analyzing a user's historical usage pattern in Marsh teaches the claimed step of evaluating cost effectiveness based a first party's ability to communication. *Id.*

"Analysis begins with a key legal question -- *what* is the invention *claimed*? Courts are required to view the claimed invention *as a whole*. 35 U.S.C. § 103. Claim interpretation, in light of the specification, claim language, other claims, and prosecution history, is a matter of law and will normally control the remainder of the decisional process." *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1987).

Claim 1 recites "evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate." The Specification does not provide an express

definition for “ability.” (FF 4.) We find that the customary and ordinary meaning of “ability” is natural aptitude or acquire proficiency. (FF 5.) Therefore, given the broadest reasonable construction of the claim in light of the Specification as it would be interpreted by one of ordinary skill in the art, we construe the claim to require the step of evaluating a cost effectiveness of a mode of communication of said modes of communication based on the natural aptitude or acquire proficiency of the first party to communicate.

We find that Marsh’s step of analyzing historical usage pattern (FF 7) teaches evaluating a cost effectiveness of a mode of communication based on a first party’s natural aptitude or acquired proficiency to communicate. The historical usage pattern represents the quality of the first party’s ability to communicate.

Therefore, we find that the Appellants have not shown that the Examiner erred in rejecting claim 1 under 35 U.S.C. § 103(a) as unpatentable over Marsh in view of Dalheimer. Accordingly, we affirm the rejection of claim 1.

#### *Claims 8 and 14*

The Appellants’ argument for claims 8 and 14 (App. Br. 31-34) are word-for-word the same as the argument for claim 1. Like claim 1, claim 8 recites a method, which also recites the step of evaluating a cost effectiveness of a standard mode of communication of said modes of communication based on said first party’s ability to communicate. (FF 2.) Accordingly, because we found Appellants’ arguments unpersuasive as to that rejection, we find them equally unpersuasive as to error in the rejection of claim 8. We affirm the rejection of claim 8.

Claim 14 recites a program storage device readable by a machine and embodying a program of instruction which performs a method. The method including the step of evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate. (FF 3.) As discussed above with regards to claim 1, we find that Marsh in view of Dalheimer discloses a program storage device (FF 6) with a program which performs the claimed evaluating step. We affirm the rejection of claim 14.

*Claims 6 and 19*

The Appellants argued claims 6 and 19 as a group (App. Br. 34). We select claim 6 as the representative claim for this group, and the remaining claim 9 stands or falls with claim 6. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants argue that Marsh does not teach performing a cost-benefit analysis with respect to a mode of communication matching said first party's ability because Marsh discloses calculating the efficiencies of different service plans. (App. Br. 34.) The Appellants argue that service plans are not modes of communications. *Id.*

The Examiner contends that the combination of Marsh and Dalheimer teaches performing a cost benefit analysis with respect to a mode of communication. (Answer 17.) Marsh teaches performing a cost benefit analysis of wireless service and Dalheimer teaches different communication modes. *Id.*

Claim 6 recites "further comprising before said implementing, performing a cost-benefit analysis with respect to a mode of communication matching said first parties ability."

As discussed above in regards to claim 1, we find that applying Marsh's method of selecting wireless service plans to the choice of communication channels (i.e. modes) in Dalheimer would yield predictable results. The result being a method of selecting a communication mode as claimed, including performing a cost benefit analysis of a mode of communication instead of a service plan.

Therefore, we find that the Appellants have not shown that the Examiner erred in rejecting claims 6 and 9 under 35 U.S.C. § 103(a) as unpatentable over Marsh in view of Dalheimer. Accordingly, we affirm the rejection of claims 6 and 9.

*Claims 2 and 15*

The Appellants argue against the rejection of claims 2 and 15 for the same reasons used to argue against the rejection of claims 1 and 14. (App. Br. 36.) Accordingly, because we found them unpersuasive as to that rejection, we find them equally unpersuasive as to error in the rejection of claims 2 and 15. The rejection of claims 2 and 15 is affirmed.

*Claims 3, 10, and 16*

The Appellants argue against the rejection of claims 3, 10, and 16 for the same reasons used to argue against the rejection of claims 1, 8, and 14. (App. Br. 36.) Accordingly, because we found them unpersuasive as to that rejection, we find them equally unpersuasive as to error in the rejection of claims 3, 10, and 16. The rejection of claims 3, 10, and 16 is affirmed.

*Claims 5, 12, and 18*

The Appellants argued claims 5, 12, and 18 as a group (App. Br. 37). We select claim 5 as the representative claim for this group, and the remaining claims 12 and 18 stand or fall with claim 5. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants argue “[a]lthough the prior art references disclose evaluating communication channels based on “cost”, unlike the claimed invention, the prior art does not teach or suggest the claimed element that such “cost effectiveness” is evaluated *based on a second party’s ability to communicate.*” (Answer 37.) The Appellants further state:

The vaguely referenced “cost” considered in Dalheimer is not based on a second party’s ability to communicate; rather, the cost considered is not specific to a particular user. Moreover, Marsh does not evaluate the cost effectiveness of a mode of communication based on the subscriber’s ability to communicate.

(Answer 40.)

However, we find that claim 5 does not require that the cost effectiveness be evaluated *based on a second party’s ability to communicate.* “Many of appellant’s arguments fail from the outset because, . . . they are not based on limitations appearing in the claims . . . .” *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982). Instead, claim 5 requires that the evaluated cost effectiveness be *to the second party*. Claim 5 recites “wherein said decision tree orders modes of communication that are evaluated by their cost effectiveness to the second party.” Claim 5 depends upon claim 1, which requires “evaluating a cost effectiveness of a mode of communication of said mode of communication based on said first party’s ability to communicate.” We construe claim 5 to require evaluating a cost effectiveness of one of the



claimed modes of communication based on the first party's ability to communicate, wherein the cost effectiveness is the cost effectiveness to the second party. Claim 5 does not require evaluating the cost effectiveness of the claimed modes of communication based on the second party's ability to communicate as the Appellants argue.

Therefore, we find that the Appellants have not shown that the Examiner erred in rejecting claims 5, 12, and 18 under 35 U.S.C. § 103(a) as unpatentable in view of Marsh and Dalheimer. Accordingly, we affirm the rejection of claims 5, 12, and 18.

*Claims 7, 13, and 20*

The Appellants argued claims 7, 13, and 20 as a group (App. Br. 40). We select claim 7 as the representative claim for this group, and the remaining claims 13 and 20 stand or fall with claim 7. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants argue that Marsh describes comparing the costs of service plans of one mode of communication and not the costs of different modes of communication. (App. Br. 40-41.)

As discussed above with regards to claim 43, we find that applying Marsh's method of selecting wireless service plans to the choice of communication channels (i.e. modes) in Dalheimer would yield predictable results. The result being a method of selecting a communication mode as claimed. The resulting method would also result in comparing the costs of different communication modes as recites in claim 7.

Therefore, we find that the Appellants have not shown that the Examiner erred in rejecting claims 7, 13, and 20 under 35 U.S.C. § 103(a) as

unpatentable in view of Marsh and Dalheimer. Accordingly, we affirm the rejection of claims 7, 13, and 20.

*Claim 21 and 22*

The Appellants argue against the rejection of claims 21 and 22 for the same reasons used to argue against the rejection of claims 1 and 14. (App. Br. 42.) Accordingly, because we found them unpersuasive as to that rejection, we find them equally unpersuasive as to error in the rejection of claims 21 and 22.

CONCLUSIONS OF LAW

We conclude that the Appellants have not shown that the Examiner erred in rejecting claims 1-3, 5-8, 10, 12-16, and 18-22 under 35 U.S.C. § 103(a) as unpatentable over Marsh in view of Dalheimer.

DECISION

The decision of the Examiner to reject claims 1-3, 5-8, 10, 12-16, and 18-22 is affirmed.

AFFIRMED

JRG

FREDERICK W. GIBB, III  
Gibb Intellectual Property Law Firm, LLC  
2568-A RIVA ROAD  
SUITE 304  
ANNAPOLIS, MD 21401